

Amendments to the Specification

Please insert the following paragraph on line 22 of page 3:

-- Figure 12 is a schematic view of a reservoir having multiple chambers, according to an embodiment of the present invention. --

Please replace the paragraph beginning on line 26 of page 10 with the following paragraph:

-- In a preferred embodiment, a reservoir 154 comprises two chambers 402a, 402b (see Figure 12) separated by a barrier 404, such as, for example, an ion permeable membrane, salt bridge, dialysis membrane, polymer film, diffusion membrane, ionomer, e.g. Nafion from Dupont, nanoporous glass, e.g. Vycor from Corning, and/or the like. In some embodiments, one chamber contains a fluid to be contacted with the microfluidic chip. A second chamber contains a fluid in contact with an electrode 406 and is not in fluid communication with the microfluidic chip. The barrier permits electrical communication between the two chambers, in this embodiment, and prevents fluidic communication between the chambers. In this manner, fluid entering the microfluidic chip is not altered by any effects of applying a voltage across the fluid, such as pH change. --

Please replace the paragraph beginning on line 3 of page 16 with the following paragraph::

-- Further, in preferred embodiments, one or more reservoirs in the reservoir module contain an electrode 406 (see Figure 12) for interconnection to the power module 408, described further below. The electrode is positioned to be in contact with the fluid contents of one or more reservoirs. In this manner, fluid may be transported within the microfluidic chip by the application of voltages to one or more electrodes in reservoirs, in accordance with embodiments of the invention. For example, in some embodiments, a contiguous fluid stream exists between two reservoirs through one or more channels in the microfluidic device. By applying a voltage or current between the two reservoirs, fluid is transported toward one of the reservoirs, determined by the polarity of the voltage or current application and the fluid used. --